REMARKS

Claims 1-12 are pending. By this Amendment, the specification is amended to correct minor informalities, and claims 1, 5, 7 and 11 are amended.

The attached Appendix includes a marked-up copy of the rewritten paragraph (37 C.F.R. §1.121(b)(1)(iii)) and claim (37 C.F.R. §1.121(c)(1)(ii)).

The Applicants appreciates the courtesies extended to the Applicant's representative during the September 4 Personal Interview. The substance of the discussions held during the Personal Interview are incorporated into the following remarks.

I. Claims 1 And 5 Satisfy All Formal Requirements

The Office Action objects to claims 1 and 5 for informalities. Claims 1 and 5 have been amended to obviate this rejection.

II. Claims 7 and 11 Satisfy The Requirements of 35 U.S.C. §112, Second Paragraph

The Office Action rejects claims 7 and 11 under 35 U.S.C. §112, Second Paragraph. Claim 7 has been amended to obviate this rejection. Applicant believes that the Office Action is mistaken with respect to claim 11. Specifically, claim 11 does not contain the recitation as written in the Office Action.

III. The Claims Define Patentable Subject Matter

The Office Action rejects claims 1-12 under 35 U.S.C. §102(b) over USP 5,835,179 to Yamanaka. This rejection is respectfully traversed.

Yamanaka does not disclose an entrance side substrate portion having a thickness greater than the exit side substrate portion, as recited in independent claims 1, 5, 7, and 11. In the invention of claims 1, 5, 7, and 11 the thickness Ti of the entrance side substrate portion 101 is set to be larger than the thickness To of the exit side substrate portion 102. This is because the light condensed by the microlens 113a impinge upon the liquid crystal layer 103 and the light emitted from the liquid crystal layer 103 diverges due to the action of the microlens 113a. See, e.g., specification page 6, lines 25-page 7, line 8.

Yamada does not disclose this features. Specifically, in Yamanaka, the entrance side and exit side substrates have equal thickness. See, e.g., Fig. 5.

IV. Conclusion

In view of the foregoing, Applicants respectfully submit that this application is in condition for allowance. Favorable consideration and prompt allowance are earnestly solicited.

Should the Examiner believe that anything further is desirable in order to place this application in even better condition for allowance, the Examiner is requested to contact Applicants' undersigned representative at the telephone number listed below.

Respectfully submitted,

James A. Oliff
Registration No. 27,075

Michael Britton
Registration No. 47,260

JAO:MQB/tam

Attachment:
Appendix
Petition for Extension of Time

Date: September 4, 2002

OLIFF & BERRIDGE, PLC
P.O. Box 19928
Alexandria, Virginia 22320
Telephone: (703) 836-6400

DEPOSIT ACCOUNT USE AUTHORIZATION
Please grant any extension necessary for entry;
Charge any fee due to our Deposit Account No. 15-0461

APPENDIX

Changes to Specification:

Page 9, lines 23-Page 10, line 5:

IN THE SPECIFICATION:

As described with reference to Figs. 2(A)-(B), the liquid crystal device 100 modulates the linear polarized light aligned by the entrance side polarizer 100a in the liquid crystal cell 100b, and modulates the quantity of light passing the exit side polarizer 100c, thereby generating light representing an image. As described above, when birefringence is generated in a member constituting the liquid crystal device, the quantity of light usable in the liquid crystal device decreases, and the quantity of unusable light increases. For example, when displaying a black image, it is ideal that no light should be emitted from the liquid crystal device. However, in some cases, light is allowed to be emitted from the liquid crystal device by the generation of birefringence. When displaying a white image, on the other hand, the quantity of light emitted from the liquid crystal device decreases. As a result, a deterioration in contrast occurs. When this deterioration in contrast occurs, an inconsistency in color is generated in a liquid crystal device equipped with a color filter. Also in the case of a projection display device displaying a color image by using three liquid crystal devices, an ~~consistency~~ inconsistency in color occurs due to a variation in the deterioration in contrast among the liquid crystal devices.

IN THE CLAIMS:

Please replace claims 1, 5 and 7 and 11 as follows:

1. (Amended) A liquid crystal device having a plurality of pixels that modulates light in accordance with a given image signal, the liquid crystal device comprising:

an exit side substrate portion;

an entrance side substrate portion opposed to the exit side substrate portion; ~~and~~

a liquid crystal layer placed between the exit side substrate portion and the entrance side substrate portion~~,~~;

the exit side substrate portion comprising an exit side substrate, a first electrode that drives the liquid crystal layer formed on the ~~exist~~ exit side substrate, and an exit side cover arranged on an exit side with respect to the exit side substrate~~,~~;

the entrance side substrate portion comprising an entrance side substrate and a second electrode that drives the liquid crystal layer formed on the entrance side substrate~~,~~;

the exit side cover having an absolute value of a coefficient of thermal expansion of less than $37 \times 10^{-7}/^{\circ}C$; and

the entrance side substrate portion having a thickness greater than the exit side substrate portion.

5. (Amended) The liquid crystal device having a plurality of pixels that modulates light in accordance with a given image signal, the liquid crystal device comprising:

an exit side substrate portion;

an entrance side substrate portion opposed to the exit side substrate portion; ~~and~~

a liquid crystal layer placed between the exit side substrate portion and the entrance side substrate portion~~,~~;

the exit side substrate portion comprising an exit side substrate and a first electrode that drives the liquid crystal layer formed on the ~~exist~~ exit side substrate~~,~~;

the entrance side substrate portion comprising an entrance side substrate, a second electrode that drives the liquid crystal layer formed on the entrance side substrate, and

an entrance side cover arranged on an entrance side with respect to the entrance side substrate~~, and~~;

the entrance side cover having an absolute value of a coefficient of thermal expansion of less than 37 x 10^{-7}/°C; and

the entrance side substrate portion having a thickness greater than the exit side substrate portion.

7. (Amended) A projector for displaying an image by projecting it, comprising:

a liquid crystal device having a plurality of pixels that emits light after modulating in accordance with a given image signal;

an illumination system that irradiates light to the liquid crystal device; and

a projection system that projects light emitted from the liquid crystal device, the liquid crystal device comprising:

an exit side substrate portion;

an entrance side substrate portion opposed to the exit side substrate portion; ~~and~~

a liquid crystal layer placed between the exit side substrate portion and the entrance side substrate portion~~,~~;

the exit side substrate portion comprising an exit side substrate ~~on which~~ and a first electrode that drives the liquid crystal layer formed on the exit side substrate, and an exit side cover arranged on an exit side with respect to the exit side substrate~~,~~;

the entrance side substrate portion comprising an entrance side substrate and a second electrode that drives the liquid crystal layer formed on the entrance side substrate~~, and~~;

the exit side cover having an absolute value of a coefficient of thermal expansion of less than 37 x 10^{-7}/°C

the entrance side substrate portion having a thickness greater than the exit side substrate portion.

11. (Amended) A projector for displaying an image by projecting, comprising:

a liquid crystal device having a plurality of pixels that emits light after modulating in accordance with a given image signal;

an illumination system that irradiates light to the liquid crystal device; and

a projection system that projects light emitted from the liquid crystal device, the liquid crystal device comprising:

an exit side substrate portion;

an entrance side substrate portion opposed to the exit side substrate portion; ~~and~~

a liquid crystal layer placed between the exit side substrate portion and the entrance side substrate portion~~,~~;

the exit side substrate portion comprising an exit side substrate on which a first electrode that drives the liquid crystal layer formed on the exit side substrate~~,~~;

the entrance side substrate portion comprising an entrance side substrate, a second electrode that drives the liquid crystal layer formed on the entrance side substrate, and an entrance side cover arranged on an entrance side with respect to the entrance side substrate~~, and~~;

the entrance side cover having an absolute value of a coefficient of thermal expansion of less than $37 \times 10^{-7}/^{0}C$; and

the entrance side substrate portion having a thickness greater than the exit side substrate portion.